

OW Management Report
Gold King Mine and Typhoon Soudelar
August 12, 2015

Gold King Mine

Background:

On August 5, while investigating the Gold King Mine in Colorado, an EPA cleanup team triggered a release of mine wastewater into Cement Creek. The EPA is working closely with responders and local, state and tribal officials to monitor water contaminated by the release. The flow from the Gold King mine is currently estimated at about 215 gallons per minute. The release's path flows through three of the EPA's regions (Region 8 (Colorado/Utah & Southern Ute Tribe, and Ute Mountain Ute Tribe); Region 6 (New Mexico), and Region 9 (Navajo Nation). EPA has activated its Emergency Operations System to ensure coordination among its regions, laboratories and national program offices in Washington, D.C. The EPA has also set up an incident command center in Durango, CO. The EPA is closely coordinating with officials in Colorado, New Mexico, Utah, Southern Ute Tribe and Navajo Nation.

The incident caused a spike in concentrations of total and dissolved metals as the contaminated mine water moved downstream. These concentrations began to trend toward pre-event conditions by 8/6. Data collected on 8/7 and 8/8, once it is evaluated, will inform whether the trend towards pre-event conditions continues. EPA is working with State and local government officials to determine when to reopen drinking water intakes and open the river for recreation. The contaminant plume is depositing sediments and EPA is beginning to assess the impacts of the sediment.

Response Coordination:

The EPA HQ EOC is now fully activated. Shifts will be 8:30 AM – 6 PM, Monday to Friday. No evening or weekend shifts are anticipated. Kevin Tingley will tentatively staff the Water Desk through Friday August 14.

EPA Activities:

Region 8:

The EPA initiated a water quality sampling effort on August 5, 2015, to assess the impacts of the release at the Gold King Mine. There were a total of 5 sampling teams deployed on Monday, 8/10/2015, three from the EPA Region 8 and two from Colorado Department of Health and the Environment (CDPHE). There were four river and 30-40 well water samples collected August 10, 2015. The EPA collected surface water quality samples from seven locations; two of these locations were on Cement Creek, and five of these were on the Animas River in Colorado. Well samples were also collected. These locations were selected based on the availability of an historical dataset for these locations. These analysis of these samples include pH, dissolved concentrations of metals, and operational milestones. The CDPHE collected samples from raw and finished drinking water supplies and water samples from the northern

segment of the Animas River.

Treated water from the last treatment pond is discharging into Cement Creek at levels cleaner (higher pH and lower levels of metals) than pre-event, background conditions in the creek. Over the next several days, the EPA will make upgrades to the system to ensure its continued operation.

Colorado Parks & Wildlife officials have been monitoring the effects of the spill on terrestrial & aquatic wildlife since the incident began. To date there has been no indication of widespread fish mortality in the Animas or San Juan. Fish cages placed directly in the Animas River by the State of Colorado Division of Parks and Wildlife for two days indicate one mortality out of 108 fish tested.

EPA Region 8 is distributing bottled water to citizens, and both potable and non-potable water for livestock and other agricultural purposes, as needed.

Region 8 has been coordinating private well sampling, with both EPA and State teams (including contractors) collecting well samples in Colorado. EPA is paying for the analyses. EPA has been sampling all wells that have been requested, but is now creating a prioritization process since the demand is so high. Region 8 staff have created a list of private wells in the alluvial zone near the river, and is now sorting that list by distance to the river.

Region 6:

Private Drinking Water Well Sampling: Six private drinking water well teams collected samples on August 11, 2015 at 30 locations.

Surface Water and Sediment Sampling: Nine surface water and sediment samples were collected. Three of the nine sediment samples had visible discolored sediment material. One of these samples was from Farmington and two were from Aztec. Preliminary lab data from August 8, 2015, post slug samples has been received and are being validated and interpreted.

Agriculture and Livestock Water: San Juan County has requested water hauler trucks to start making deliveries. Each water hauler is estimated to be able to carry 5,000 gallons. One truck is needed per acre, which provides about a quarter inch of water. Four water deliveries for agriculture or livestock needs were made on August 11, 2015. The limiting factor is the number of available trucks. We estimate 13 available trucks by the end of the week. San Juan County is coordinating loading points and logistics for staging and scheduling the trucks.

EPA assisted NMED by providing support at the residential water testing station located at the San Juan County Fair.

Region 9:

An Incident Command Post (ICP) has been established in Farmington. A Lake Powell Division is also being established. Region 9 is focusing on developing a sampling plan. The Region is also reaching out to other agencies (especially USGS) to access additional sampling results.

Infrastructure Impacts:

Region 8:

System Name	Population	# Days Water Available
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Durango, CO	23,000	Indefinite, using another source
Glacier Club, CO	525	Indefinite, using stored water and another source
No impacted systems in Utah, all have groundwater sources		

Region 6:

Based on conversation with the State of New Mexico and drinking water systems on August 11, 2015, the following is the list of affected water systems and their status:

System Name	Population	# Days Water Available
Aztec Domestic Water System	6800	10 days
Farmington Water System	47000	60 - 90 days
Lower Valley WUA	8428	8 days
Morningstar Water Supply System	6423	7-14 days
Northstar WDWCA	4123	45 days
Southside Mutual Domestic	1593	5 days but depends on Aztec
Upper La Plata WUA	2265	Depends on Aztec and Farmington
Flora Vista	4300	1 day but depend on Aztec
Total Population	80,392	

Region 9:

No information

Sampling Results:

The following outlines the process for validating, verifying, interpreting data, and preparing statements for the web for the response at Gold King Mine. As agreed to by HQ EOC, Unified Area Command (UAC), Regions 6, 8 and 9, the regional EOC environmental units (EU) will follow the data format used during the Deepwater Horizon response and will conduct level 2 validation on data collected and analyzed during the response. Screening levels will be part of the data packages. Each EU will submit their validated data to the UAC with a concurrent courtesy copy sent to the HQ EOC for verification. The UAC PIO will develop key messages about the data and coordinate those messages with the HQ EOC

PIO. Data displays for 5 Key Chemicals of Concern (COC's), GIS overlays, and red, yellow, green color coding will be part of the data packages. The UAC PIO will post the data on the EPA Gold King Mine website. Notification prior to posting will be made via the UAC to States, Tribes, and congressional contacts and the HQ EOC. Trending messages will also be developed once there is sufficient data for the analysis.

Sampling results on the upper Animus River show pollutant concentrations starting to return to pre-incident levels.

Typhoon Soudelar

EPA Activities:

Mission Assignments: FEMA has issued EPA 4 post-activation Mission Assignments, with one to provide subject matter experts (SMEs) for water. Current Task Force activities include:

- Monitor progress on installing generators at Commonwealth Utility Corporation (CUC) wells
- Assess production of drinking water from Marines TWPS and delivery to hospital
- Continue to monitor bottled water companies production, CUC water filling stations, and hotel drinking water filling stations.
- Draft Drinking Water and Wastewater Assessment tracking forms.

Situation Updates:

CUC Water:

While the water distribution system is still not operating, CUC has five water distribution stations open: Navy Hill, Kagman, Kanat Tabla, Akgag, and Capitol Hill. Families are allowed 100 gallons each and have been bringing all sorts of containers to these filling stations. CUC and DEQ continue to assess alternatives to get some of the water wells up and operating. DEQ estimates that approximately 10 million gallons/day are normally produced by the CUC system to serve Saipan's water needs. A water task force has been set up by FEMA with staffing from DEQ, and EPA continues to provide assistance via the water SME Mission Assignment. DEQ has contacted all of the resorts which produce and treat their own water to see if they have the capacity to provide water to the public.

Some wells are beginning to be brought back on-line. CUC hopes provide water to these villages one at a time, a few hours per day, to allow people to fill their personal tanks and have water in their homes.

Bottled Drinking Water:

There continues to be concern about people who cannot buy bottled water. There are members of the public distributing water for free.

By day's end yesterday, Saipan Water and Ice had fixed one of their 3,000 gallon tanker trucks and offered it to the EOC. Saipan Water and Ice & STAR water are still operating and delivered free water to Chalan Kanoa. JG Sablan is still working on bringing well online. As per Water Task Force direction, the USCG PST will be going village to village, surveying stores to see how much water bottled is available. How much is on hand, how long will it last, what is the outlook for re-supply.

Bottled water was delivered on a supply vessel; three bulk distribution sites were established. MREs and 70,000 liters of individual 1 liter cartons of drinking water were distributed.

The USMC started delivering bottled water to Villages today.

Emergency Drinking Water:

5 water stations are still distributing water with modest wait times. Additional water distribution points are planned to provide water from the Natl Park Service and 3 fire stations.

There are 5 portable RO units (Tactical Water Purification Unit - TWPS) which were brought by the Marines, although not formally requested as part of response. One of the units has been approved for use for the hospital, along with crew of Marines to operate it. Full production of drinking water at this site expected to start Sunday evening.

Wastewater:

There are two waste water treatment plants on Saipan - Agingan and Sadog Tasi. Agingan has been operational throughout and the Sadog Tasi wastewater treatment plant has been provided with a temporary generator so that secondary treatment may operate. A number of the wastewater lift stations have back-up generators and are in operation, and others do not have generators and are not operating.

Shelters:

All of the shelters have generators and water, however they are filled to over capacity (in some cases twice capacity) and have concerns about fuel for the generators. EOC is coordinating delivery for sanitation water. Drinking water is being delivered by EOC/CNMI government in bulk cases.